

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Currently amended) A combined radiation and drug delivery catheter for inhibiting hyperplasia, comprising:

a catheter body having a proximal end and a distal end;

an ionizing radiation source coupleable to the catheter body for applying a radiation dose to a body lumen;

a source of at least one radiosensitizer;

a balloon coupleable to the catheter body; and

a matrix formed over at least a portion of the balloon means coupleable to the catheter body or the radiation source for releasing the radiosensitizer to the body lumen, wherein the radiosensitizer source is in or beneath the matrix and the balloon is free of the radiosensitizer source, wherein the combined radiation and radiosensitizer delivery catheter inhibit hyperplasia.

2. (Original) A delivery catheter as in claim 1, wherein the ionizing radiation source is an x-ray tube.

3. (Withdrawn) A delivery catheter as in claim 1, wherein the ionizing radiation source is a radioisotope.

4. (Withdrawn) A delivery catheter as in claim 1, wherein the ionizing radiation source is a receptacle in the catheter body for receiving radioisotopic materials.

5. (Previously presented) A delivery catheter as in claim 1, wherein the source of at least one radiosensitizer is selected from the group consisting of taxol, misonidazole, metronidazole, etanidazole, 5-fluorouracil, texaphyrin, C225, and cyclooxygenase-2 inhibitor.

6. (Previously presented) A delivery catheter as in claim 1, wherein the source of at least one radiosensitizer comprises a source of taxol incorporated in a solution with polyoxyethylated castor oil and dehydrated alcohol.

7. (Original) A delivery catheter as in claim 1, wherein the radiosensitizer is attached or encapsulated in a lipid or surfactant carrier.

8-11. (Cancelled)

12. (Currently amended) A delivery catheter as in claim 1 ~~11~~, wherein the matrix comprises a rate controlling material, wherein the rate controlling material controls the rate at which the radiosensitizer is released from or through the matrix.

13. (Original) A delivery catheter as in claim 12, wherein the radiosensitizer is released from the matrix by diffusion through the matrix.

14. (Original) A delivery catheter as in claim 12, wherein the radiosensitizer is released from the matrix by degradation of the matrix.

15. (Original) A delivery catheter as in claim 12, wherein the rate controlling material is porous and the radiosensitizer is released from the material by elution from pores.

16. (Currently amended) A delivery catheter as in claim 1 ~~11~~, wherein the radiosensitizer is disposed on the balloon.

17. (Currently amended) A delivery catheter as in claim 1 ~~8 or 11~~, wherein the ionizing radiation source is positionable within the balloon.

18. (Cancelled)

19. (Currently amended) A delivery catheter as in claim 1 ~~8 or 11~~, further comprising perfusion threading on an outer surface of the balloon.

20. (Original) A delivery catheter as in claim 19, wherein the threading has a spiral, helical, or angled pattern.

21. (Currently amended) A delivery catheter as in claim 1 ~~8 or 11~~, wherein the catheter body has a perfusion lumen.

22-42. (Cancelled)

43. (New) A combined radiation and drug delivery catheter for inhibiting hyperplasia, comprising:

a catheter body having a proximal end and a distal end;

an ionizing radiation source coupleable to the catheter body for applying a radiation dose to a body lumen;

a source of at least one radiosensitizer;

means coupleable to the catheter body or the radiation source for releasing the radiosensitizer to the body lumen, wherein the combined radiation and radiosensitizer delivery catheter inhibit hyperplasia; and

perfusion threading on an outer surface of the means for releasing the radiosensitizer.

44. (New) A delivery catheter as in claim 43, wherein the ionizing radiation source is an x-ray tube.

45. (New) A delivery catheter as in claim 43, wherein the source of at least one radiosensitizer is selected from the group consisting of taxol, misonidazole, metronidazole, etanidazole, 5-fluorouracil, texaphyrin, C225, and cyclooxygenase-2 inhibitor.

46. (New) A delivery catheter as in claim 43, wherein the source of at least one radiosensitizer comprises a source of taxol incorporated in a solution with polyoxyethylated castor oil and dehydrated alcohol.

47. (New) A delivery catheter as in claim 43, wherein the radiosensitizer is attached or encapsulated in a lipid or surfactant carrier.

48. (New) A delivery catheter as in claim 43, wherein the means for releasing the radiosensitizer comprises a microporous balloon on the catheter body.

49. (New) A delivery catheter as in claim 48, wherein the microporous balloon contains the radiosensitizer and the radiosensitizer is released from the microporous balloon by elution from pores.

50. (New) A delivery catheter as in claim 49, wherein the microporous balloon is inflatable with the radiosensitizer.

51. (New) A delivery catheter as in claim 43, wherein the means for releasing the radiosensitizer comprises a matrix formed over at least a portion of a balloon on the catheter body, wherein the radiosensitizer is in or beneath the matrix.

52. (New) A delivery catheter as in claim 51, wherein the matrix comprises a rate controlling material, wherein the rate controlling material controls the rate at which the radiosensitizer is released from or through the matrix.

53. (New) A delivery catheter as in claim 52, wherein the radiosensitizer is released from the matrix by diffusion through the matrix.

54. (New) A delivery catheter as in claim 52, wherein the radiosensitizer is released from the matrix by degradation of the matrix.

55. (New) A delivery catheter as in claim 52, wherein the rate controlling material is porous and the radiosensitizer is released from the material by elution from pores.

56. (New) A delivery catheter as in claim 51, wherein the radiosensitizer is disposed on the balloon.

57. (New) A delivery catheter as in claim 43, wherein the ionizing radiation source is positionable within the balloon.

58. (New) A delivery catheter as in claim 43, wherein the threading has a spiral, helical, or angled pattern.